

What is claimed is:

1. A Process for fluid catalytic cracking of hydrocarbon feedstocks with high levels of basic nitrogen, in multiple riser FCCUs, operating with feedstocks A and B, wherein the process comprises the following steps:

a) place in contact with a zeolite catalyst, in the main riser (7) of the FCCU, hydrocarbon feedstock A possessing a level of basic nitrogen at least 200 ppm lower than feedstock B that is being processed in the secondary riser (8) of the same FCCU;

b) simultaneously, place in contact with the same zeolite catalyst of a), in said secondary riser (8) of the FCCU, a hydrocarbon feedstock (B) comprised of a mixture made up of between 95 and 40%, in volume, of hydrocarbon stream with a percentage of catalyst damaging basic nitrogen of between 1000 and 3500 ppm, and between 5 and 60%, by weight, of a cooling fluid capable of increasing the circulation in this secondary riser and of cooling the regenerator, in order to adjust the thermal balance of the FCCU and maintain the circulation of the catalyst in the main riser, at proper levels, so that the catalyst/oil ratio remains in the range of between 4.5 and 8.5;

c) maintain the operation of the FCCU within the conditions of catalytic cracking;

d) recover from (10), products of the cracking reaction with an increase in bottom conversion, a greater proportion of gasoline and LPG, at the same time with a lower proportion of coke and combustible gas.

2. A Process according to claim 1, wherein the FCCU that includes two risers, a main riser and a secondary riser.

3. A Process according to claim 1, wherein an FCCU that includes three risers, a main and two secondary risers.

4. A Process according to claim 1, wherein hydrocarbon feedstock A of a) to be made up of heavy hydrocarbon streams with a boiling point of between 340°C and 560°C and an °API of between 8 and 28.

5. Process according to claim 4, wherein the heavy hydrocarbon flow of A including vacuum treated heavy gas oil, direct distillation heavy gas oil, atmospheric residue, vacuum residues, deasphalted oil, alone or mixed in any proportion.

6. Process according to claim 5, wherein a heavy hydrocarbon stream of A of vacuum treated heavy gas oil with a boiling point of between 380°C and 540°C and an °API of between 15 and 22.

7. Process according to claims 4, 5, and 6, wherein the heavy hydrocarbon flow of A including isolated streams and mixtures between streams that have levels of catalyst damaging basic nitrogen of between 200 and 3500 ppm.

8. Process according to claim 1, wherein hydrocarbon feedstock A possessing a level of basic nitrogen of at least 500 ppm lower than feedstock B that is being processed in the secondary riser (8) of the same FCCU.

9. Process according to claim 1, wherein hydrocarbon feedstock A possessing a level of basic nitrogen at least 1000 ppm lower than feedstock B that is being processed in the secondary riser (8) of the same FCCU.

10. Process according to claim 1, wherein hydrocarbon feedstock A possessing a level of basic nitrogen 3500 ppm lower than feedstock B that is being processed in the secondary riser (8) of the same FCCU.

11. Process according to claim 1, wherein the catalyst to be a conventional zeolite type for FCC processes of heavy feedstocks containing basic nitrogen, with around 30% zeolite dispersed in an inorganic porous carrier.

12. Process according to claim 1, wherein stream B of hydrocarbons with levels of basic nitrogen of between 1000 and 3500 ppm of b) to be a heavy hydrocarbon stream with a boiling point of between 340°C and 560°C and an °API of between 8 and 28.

13. Process according to claim 12, wherein heavy hydrocarbon stream B including vacuum treated heavy gas oil, direct distillation heavy gas oil, atmospheric residue, vacuum residues, deasphalted oil, alone or mixed in any proportion.

14. Process according to claim 13, wherein stream B of heavy hydrocarbons to be a deasphalted oil, with an initial boiling point of between 320 and 390 °C and an °API of between 12 and 18.

15. Process according to claim 1, wherein the cooling fluid in the secondary riser (8) of b) to be a light hydrocarbon stream with boiling point between 32 and 350°C and with a density at 20/4°C of between 0.7 and 1.

16. Process according to claim 15, wherein a light hydrocarbon stream is added in proportion of between 5 and 60% by volume of the total stream B.

17. Process according to claim 1, wherein the cooling fluid of the secondary riser (8) of b) to be an inert stream.

18. Process according to claim 17, wherein an inert stream to be water in proportion of between 5 and 10 % by volume of the total stream B.

19. Process according to claim 1, wherein the hydrocarbon feedstocks A of a) and B of b) to be introduced into the risers (7) and (8) at temperatures between 100 and 450°C.

20. Process according to claim 19, wherein hydrocarbon feedstocks A of a) and B of b) to be introduced into the risers (7) and (8) at temperatures of between 240 and 360°C.

21. Process according to claim 1, wherein reaction temperatures in the risers (7) and (8) to be controlled at between 510 and 570°C.

22. Process according to claim 21, wherein reaction temperatures in the risers (7) and (8) to be controlled at between 520 and 560°C.

23. Process according to claim 1, wherein the regenerated hot catalyst that it leaves the regenerator to enter into the risers (7) and (8) to be at temperatures of between 650 and 750°C.

24. Process according to claim 23, wherein the regenerated hot catalyst that it leaves the regenerator to enter into the risers (7) and (8) to be at temperatures of between 680 and 732°C.

25. Process according to claim 1, wherein the residence time of the catalyst particles, in the risers (7) and (8) to fluctuate between 0.3 and 8 seconds.

26. Process according to claim 24, wherein the residence time of the catalyst particles, in the risers (7) and (8) to fluctuate between 1 and 5 seconds.